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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,157	07/28/2003	Peter J. Black	020754	5981
23596 7590 09/18/2008 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER				
WANG, TED M				
ART UNIT		PAPER NUMBER		
2611				
NOTIFICATION DATE		DELIVERY MODE		
09/18/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com

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### Office Action Summary

**Application No.**

10/629,157

**Applicant(s)**

BLACK ET AL.

**Examiner**

TED M. WANG

**Art Unit**

2611

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 34-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 50-65 is/are allowed.
- 6) ☒ Claim(s) 34-39, 42, 66 and 67 is/are rejected.
- 7) ☒ Claim(s) 40, 41 and 43-49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/09/2008 has been entered.

***Response to Arguments***

2. Applicant's arguments with respect to claims 34-67 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 34-39, 42 and 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Smee et al. (WO 02/09305).

- With regard claim 34, Smee et al. discloses a method of receiving data in a wireless communication system, comprising:

comparing (page 30 lines 27-29, where  $S/N_{EQ}$  is compared with  $S/N_{RAKE}$ ) a first metric associated with a RAKE processing element (Fig.3 element 330 and page 29 lines 5-28, where the first metric is considered as  $S/N_{RAKE}$ ) to a second metric associated with an equalizer (Fig.3 element 310 and page 30 lines 7-26, where the second metric is considered as  $S/N_{EQ}$ ); and

based on said comparing, determining whether to transition from one of first and second modes of data reception to the other of said first and second modes of data reception (page 30 lines 27-30, where when the quality metric of the equalizer is less than that of RAKE, the selector selects RAKE (second mode) or enables the equalizer if the quality metric of the equalizer is better (first mode));

wherein said first mode of data reception is defined by a first combination of respective operational states of the RAKE processing element and the equalizer (page 30 lines 7-30 as described in the above paragraph, Examiner considers the first mode as receiver operated with the equalizer enabled that is determined by the comparison result of the first operation state with quality metric ( $S/N_{RAKE}$ ) and the second operation state with quality metric ( $S/N_{EQ}$ ), where  $S/N_{EQ} > S/N_{RAKE}$ );

wherein said second mode of data reception is defined by a second combination of respective operational states of the RAKE processing element and the equalizer (page 30 lines 7-30 as described in the above paragraph, Examiner considers the second mode as receiver operated by the Rake receiver

only that is determined by the comparison result of the first operation state with quality metric ( $S/N_{RAKE}$ ) and the second operation state with quality metric ( $S/N_{EQ}$ ), where  $S/N_{RAKE} > S/N_{EQ}$ ; and

wherein said first combination of operational states differs from said second combination of operational states (as described in the above paragraph, the first combination of operation state in first mode is operated with equalizer enable that is different from the second combination of operation state in second mode with equalizer disable or RAKE receiver only).

- With regard claim 35, Smee et al. further discloses wherein the RAKE processing element and the equalizer are enabled for operation concurrently in said first mode of data reception (page 9 lines 34-37, where the receive data processor includes two signal processing paths that can be operated in parallel to provide improved performance, especially at higher data rates. The first signal processing path includes an equalizer 310 coupled to a post processor 320, and the second signal processing path includes a rake receiver 330.)
- With regard claim 36, Smee et al. further discloses wherein the RAKE processing element is enabled for operation and the equalizer is disabled from operation in said second mode of data reception (page 30 lines 7-30 as described in the above paragraph, Examiner considers the second mode as receiver operated by the Rake receiver only that is determined by the comparison result of the first operation state with quality metric ( $S/N_{RAKE}$ ) and the second operation state with quality metric ( $S/N_{EQ}$ ), where  $S/N_{RAKE} > S/N_{EQ}$ ).

- With regard claim 37, Smee et al. further discloses wherein said first and second metrics are respective wireless communication channel metrics (Fig.3 element 330 and page 29 lines 5-28 and Fig.3 element 310 and page 30 lines 7-26, where the first metric associated with a RAKE processing element that the first metric is considered as  $S/N_{RAKE}$  and the second metric associated with an equalizer that the second metric is considered as  $S/N_{EQ}$ ; they are different and are respective wireless communication channel metrics.)
- With regard claims 38 and 39, Smee et al. further discloses wherein said wireless communication channel metrics are channel quality metrics (page 29 lines 5-28, where the first quality metric is considered as  $S/N_{RAKE}$  and page 30 lines 7-26, where the second quality metric is considered as  $S/N_{EQ}$ ).
- With regard claim 42, Smee et al. further discloses wherein each of said wireless communication channel metrics includes signal correlation information (Fig.5 element 520 and Fig.7 element 720).
- With regard claim 66, which is a mean plus function claim related to claim 34, all limitation is contained in claim 34. The explanation of all the limitation is already addressed in the above paragraph.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject

matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over “Smee et al. (WO 02/09305)” in view of Langberg et al. (US 5,852,630).

- With regard claim 66, Smee et al. discloses all of the subject matter as described above except for the method written by a software program embodied in a computer-readable medium.

However, Langberg et al. teaches that the method and apparatus for a transceiver warm start activation procedure with precoding can be implemented in software stored in a computer-readable medium. The computer-readable medium is an electronic, magnetic, optical, or other physical device or means that can be contain or store a computer program for use by or in connection with a computer-related system or method (column 3, lines 51-65). One skilled in the art would have clearly recognized that the method of “Smee et al.” would have been implemented in a software. The implemented software would perform same function of the hardware for less expense, adaptability, and flexibility. Therefore, it would have been obvious to have used the software in “Smee et al.” as taught by Langberg et al. in order to reduce cost and improve the adaptability and flexibility of the communication system.

***Allowable Subject Matter***

7. Claims 50-65 are allowed.

8. Claims 40, 41, 43-49 are objected to as being dependent upon an objected claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ted M Wang/  
Primary Examiner, Art Unit 2611